

REMARKS AND ARGUMENTS

- 1) The Examiner acknowledged the Applicants election with traverse of claims 1-4, 6- 7 that belong to Group I. The amendments to the claims 1-16 are also acknowledged. The applicant note with satisfaction that based on applicants arguments in the reply filed on August 25th 2006 the Restriction between inventions If Group I, II, II and V is withdrawn. The Examiner however, maintains the restriction between the products Groups and the method Group IV and makes this restriction final.

Accordingly claims 1-8 and 15-17 are now under examination.

- 2) The Examiner objects the disclosure due to the absence of SEQ ID NO:s after all amino acid sequences. The applicant has amended the specification to overcome this objection.
- 3) The Examiner objects claim 2 as being of improper dependent form. Claim 2 recites limitations of a pathogenic bacterium, which does not further limit structurally the peptide of claim 1. The peptide of claim 1 does not comprise gram-negative bacteria; instead it recites a structural correlation to adhesive organelle in Gram-negative bacterial.

The Applicant has amended claim 2 so as to overcome this rejection.

- 4) The Examiner objects claim 17 as being of improper dependent form. Claim 17 recites limitations on the structure of the adhesive organelle of gram-negative bacterial. However, the antimicrobial peptide of claim 2 does not comprise the adhesive organelle of Gram-negative bacteria.

The applicant has amended claim 2 of which claim 17 depends on so as to overcome this rejection.

Claim rejections under 35 USC section 112

- 5) Claims 15-16 are rejected under 35 USC 112 as being indefinite. The Examiner states that it is not clear what is intended by using ‘further consisting’ to define an inhibitor.

The applicant has amended the claim by removing the word “further” from claim 15 so as to make the claims definite.

Rejection under 35 USC 102

- 6) The Examiner rejects claims 1-3 and 17 under 35 USC 102(b) as being anticipated by Hultgren et al. US 6,001,823.

Claims 1-3 and 17 are drawn to an antimicrobial peptide comprising the sequence of Ala-Thr-Ala-Thr-Leu-Val represented by SEQ ID NO:1.

The Examiner states that Hultgren et al. disclose peptides that define the binding site of the interaction between a chaperone PapD and pilus subunits for use as inhibitors of pilus assembly in the treatment of patients infected by bacteria from the group consisting of *Escherichia coli* and *Yersinia* (column 9, line 1-10, column 8, lines 22-45). Further the Examiner states that Hultgren et al teach a peptide that comprises the instant application’s SEQ ID NO: 1 as represented by SEQ ID NO: 13 (table 1 column 49), thus meeting all the limitations of claims 1-3 and 17.

The Applicant respectfully request reconsideration of the rejection based on the following: Hultgren discloses the binding motif between PapD and a peptide

which constitutes the 19 amino acids of the C-terminal of a pilus subunit.

According to the instant disclosure the peptide corresponds to the amino terminal end. This is clearly also a limitation of claim 1. Therefore, Hultgren et al. does not anticipate the current invention as claimed.

7) Claim 5 is rejected under 35 USC 102(b) as being anticipated by Wang et al (WO02/077183).

The Examiner states that Wang el al disclose a peptide with SEQ ID NO: 64876 that comprises the sequence of Thr-Ala-Thr-Val-Thr-Val. Wang et al. further disclose that the instant sequence aligns with the sequence of Wang et al at positions 151-156, thus meeting all the limitations of claim 5.

Applicant has amended claim 5, so as to overcome this rejection.

8) Claims 6-8 are rejected under 35 USC 102(b) as being anticipated by Hochheimer A. et al. (Eur J. Biochem (1995) 234: 910-920).

The Examiner states that claims 6-8 are drawn to a peptide comprising the sequence of TTKL represented by SEQ ID NO:4.

The Examiner states that Hochmeier A. et al disclose the internal peptide of the protein FmdB obtained by endoproteinase Lys-C digestion, which contain the sequence TTKL at positions 14-17 in peptide 5-6 (table 1, page 912), thus meeting all the limitation of claims 6-8. The Examiner further states that to the extent that the applicant utilized the same sequence denoted by SEQ ID NO: 4 as was utilized by Hochmeir a et al, the teaching of Hocheimer A would inherently result in the claimed properties of inhibiting polymerization of Dr. Hamegglinin.

which constitutes the 19 amino acids of the C-terminal of a pilus subunit.
According to the instant disclosure the peptide corresponds to the amino terminal end. This is clearly also a limitation of claim 1. Therefore, Hultgren et al. does not anticipate the current invention as claimed.

7) Claim 5 is rejected under 35 USC 102(b) as being anticipated by Wang et al (WO02/077183).

The Examiner states that Wang el al disclose a peptide with SEQ ID NO: 64876 that comprises the sequence of Thr-Ala-Thr-Val-Thr-Val. Wang et al. further disclose that the instant sequence aligns with the sequence of Wang et al at positions 151-156, thus meeting all the limitations of claim 5.

Applicant has amended claim 5, so as to overcome this rejection.

8) Claims 6-8 are rejected under 35 USC 102(b) as being anticipated by Hochheimer A. et al. (Eur J. Biochem (1995) 234: 910-920).

The Examiner states that claims 6-8 are drawn to a peptide comprising the sequence of TTKL represented by SEQ ID NO:4.

The Examiner states that Hochmeier A. et al disclose the internal peptide of the protein FmdB obtained by endoproteinase Lys-C digestion, which contain the sequence TTKL at positions 14-17 in peptide 5-6 (table 1, page 912), thus meeting all the limitation of claims 6-8. The Examiner further states that to the extent that the applicant utilized the same sequence denoted by SEQ ID NO: 4 as was utilized by Hochmeir a et al, the teaching of Hocheimer A would inherently result in the claimed properties of inhibiting polymerization of Dr. Hamegglinin.

The applicant wishes to point out that Table 1 on page 912 of Hochheimer et al. discloses sequences of internal peptide of subunits of molybdenum formylmethanofuran dehydrogenase. The table gives amino acid sequence T(R)(T)VISDP(R)ETATTK for peptide 5 of 45kDAn unit of the enzyme and sequence LVAALNE(H)TK for peptide 6 of the same enzyme. Neither of these sequences comprises the claimed sequence TTKL. However, if one reads the sequence of peptide 5 and 6 of Hochheimer table one after another this sequence would comprise TTKL, but there is nothing in this publication that would indicate that those sequences are to be read one after another. Therefore, the applicant is strongly of the opinion that the rejection is inappropriate and respectfully requests the Examiner to reconsider this rejection.

CONCLUSION

The applicant has replied to each objection and rejection made by the Examiner, either by amending the claims or by arguments. The applicant believes that the claims as now amended are allowable and therefore respectfully requests reconsideration of the rejections and allowance of the claims.

DODDS AND ASSOCIATES

By:



Leea Susanne Somersalo

L0092

cc. file

Timo Korpela